

ABSTRACT

The reliability of data is significantly increased without considerably increasing costs by performing minor data corrections within an information storage device and performing major error corrections in an information processing device. When a request to transfer user data for reading is issued from an information processing device, a control circuit transfers the user data and management data to an error detection circuit, which checks the user data for errors. If the user data contains no error, the control circuit notifies the information processing device that the user data can be transferred, and transfers it to the information processing device. If the user data contains errors, an X count error position and correction data calculation circuit uses the user data and the management data to calculate correction locations and correction data, and judges whether the correction locations are correctable. If uncorrectable (there are more correction locations than X locations), the control circuit notifies the information processing device that the user data is uncorrectable, and then transfers the user data and the management data to the information processing device.